

b3 *Amend* *2/15/91*

n is a whole number from 1 to 3, equal to the valence of Me.

wherein the amount of said first [said] salt is one part by weight and the amount of said second salt is between 0.001 and 1,000 parts by weight.

B4

14. (Amended) A composition for enhancing growth of plants and for controlling pathogens in plants, comprising enhanced pathogen-controlling effective and growth-response effective amounts of phosphate and phosphonate, wherein the concentration of the phosphonate is one part by weight and the concentration of the phosphate is between .001 and 1000 parts by weight.

REMARKS:

The present invention is concerned with a plant growth enhancing composition of at least one phosphate salt and at least one phosphonate salt. This composition can be used solely for its growth enhancing properties, and also has the additional benefit of being fungicidally effective, thereby eliminating or minimizing the need to use a separate product to achieve this result.

The Examiner rejected claims 7 and 14-18 under 35 U.S.C. §112, second paragraph, as assertedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In response thereto, claims 7 and 9 have been amended to set forth relative proportions for all ingredients. As a result, these claims should now overcome the rejection under 35 U.S.C. §112, second paragraph. Minor amendments have also been made to correct typographical errors.

The Examiner also rejected claims 7-9 and 11-19 under 35 U.S.C. § 112, first paragraph, because the specification, while being enabling for specific inorganic salts of phosphonate and phosphate inorganic compounds, assertedly does not provide enablement for the inorganic salts of phosphonate and phosphate organic compounds. The examiner's attention is respectfully

directed to page 2, lines 3 and 16, which teach the use of specific organic salts. The examiner's attention is also respectfully directed to page 3, line 12, which specifically incorporates by reference teachings regarding organic compounds. These specific organic compounds set forth by reference in the specification enable one of skill in the art to use the invention commensurate in scope with the claims of this application. Thus, it is respectfully submitted that the rejection under 35 U.S.C. §112, first paragraph, be withdrawn.

The Examiner also provisionally rejected claims 7-9 and 11-19 under 35 U.S.C. §101 as assertedly claiming the same invention as that of claims 7-9 and 13-15 of copending Application No. 08/943,002. Claims 8 and 19 of the present application are cancelled herewith. Claims 8 and 14 of copending Application No. 08/943,002 have been cancelled. Claims 7, 9, 13 and 15 of the '002 application are drawn to a fungicidal composition having "enhanced fungicidally effective amounts" of salts for controlling fungus in plants, whereas claims 7 and 9 of the present application are drawn to a fertilizing composition having enhanced growth stimulating effective amounts of salts, and claims 11-18 are drawn to a combination fertilizing/fungicidal composition having both enhanced growth stimulating and fungicidally effective amounts of salts.

"Same invention" means claims drawn to identical subject matter. *In re Longi*, 759 F.2d 887, 892, 225 U.S.P.Q. 645, 648 (Fed.Cir. 1985); *In re Vogel*, 422 F.2d 438, 441, 162 U.S.P.Q. 619, 621 (C.C.P.A. 1970); *see also In re Walles*, 366 F.2d 786, 789, 151 U.S.P.Q. 185 (C.C.P.A. 1966) (Before two claims can be said to claim the same invention, they must in fact claim the same subject matter). The test is whether one of the claims could be literally infringed without literally infringing the other. *In re Vogel*, 422 F.2d at 441. If it could be, the claims do not define identically the same invention. *Id.* "The analysis of whether one invention has been twice claimed requires a factual inquiry into whether the claims of the application are directed to

the same subject matter, or invention, as the claims of the patent. If there be any substantive difference, and not merely a difference in language, then the inventions are not the same no matter how small or how obvious those differences may be." *In re White*, 405 F.2d 904, 906, 160 U.S.P.Q. 417 (C.C.P.A. 1969).

Claims 7 and 9 of the present application are drawn specifically to fertilizing compositions comprising enhanced growth stimulating effective amounts of at least a first salt and a second salt, whereas claims 7, 9, 13, and 15 of copending application 08/943,002 are drawn specifically to fungicidal compositions for controlling fungus in plants comprising enhanced fungicidally effective amounts of at least a first salt and a second salt. As there are substantive differences between the subject matter claimed by claims 7 and 9 of the present application and claims 7, 9, 13, and 15 of copending application 08/943,002, and it would be possible for one to infringe the claims of the present application but not the claims of copending application 08/943,002, or vice versa, these claims do not claim the same invention and Applicant respectfully requests that the rejection of claims 7 and 9 under 35 U.S.C. §101 be withdrawn.

Claims 11-18 of the present application are drawn specifically to compositions for stimulating or enhancing growth and controlling fungus disease or other pathogens in plants, comprising various amounts of a phosphonate salt and a phosphate salt, whereas claims 7, 9, 13, and 15 of copending application 08/943,002 are drawn solely to fungicidal compositions for controlling fungus in plants comprising enhanced fungicidally effective amounts of at least a first salt and a second salt. As there are substantive differences between the subject matter claimed by claims 11-18 of the present application and claims 7, 9, 13, and 15 of copending application 08/943,002, and it would be possible for one to infringe the claims of the present application but not the claims of copending application 08/943,002, or vice versa, these claims do not claim the

same invention and Applicant respectfully requests that the rejection of claims 7 and 9 under 35 U.S.C. §101 be withdrawn.

The Examiner also provisionally rejected claims 7-9 and 11-19 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7-9 and 13-15 of copending Application No. 08/943,002. Claims 8 and 19 of the present application are cancelled herewith. Claims 8 and 14 of copending Application No. 08/943,002 have been cancelled. Claims 7, 9, 13 and 15 of copending Application No. 08/943,002 are drawn solely to a fungicidal composition for controlling fungus in plants, whereas claims 7 and 9 of the present application are drawn to a fertilizing composition, and claims 11-18 are drawn to a combination fertilizing/fungicidal composition.

Patents which issue from copending applications may overlap with respect to the information they disclose without necessarily resulting in double patenting. *Phillips Petroleum Co. v. United States Steel Corp.*, 604 F.Supp. 555, 560, 225 U.S.P.Q. 1149 (D.Ct. Del. 1985). In considering whether any claim in the present application defines an obvious variation of an invention disclosed and claimed in copending application 08/943,002, the disclosure of the copending application cited in support of the double patenting rejection may not be used as prior art. *General Foods Corp. v. Studiengesellschaft Kohle mbH*, 972 F.2d 1272, 1281-82, 23 U.S.P.Q.2d 1839 (Fed.Cir. 1992); *In re Vogel*, 422 F.2d 438, 441, 164 U.S.P.Q. 619 (C.C.P.A. 1970). Patent claims are looked to only to see what has been patented, the subject matter which has been protected, not for something one may find to be disclosed by reading them. *General Foods Corp.*, 972 F.2d at 1281. "It is the claims of the patent, rather than the information disclosed in the specification, that delineate the scope of the monopoly and are critical to the double patenting inquiry." *Phillips Petroleum Co.*, 604 F.Supp. at 561. The doctrine of double

patenting does not preclude a second patent on subject matter which is disclosed but not claimed in the first patent. *Id.*

There is no basis in the record for the conclusion that the compositions claimed by the present application in claims 7, 9, and 11-18 would have been obvious for the use claimed therein, given only the compositions and their respective usage claimed in claims 7, 9, 13 and 15 of copending Application No. 08/943,002.

If still considered necessary by the Examiner, Applicant is prepared to enter an appropriate terminal disclaimer.

The Examiner also provisionally rejected claims 7-9 and 11-19 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 10-12 and 16-18 of copending Application No. 08/943,002. Claims 8 and 19 of the present application are cancelled herewith. Claims 11 and 17 of copending Application No. 08/943,002 have been cancelled. Claims 10, 12, 16 and 18 of the '002 application are drawn solely to a method of controlling fungus disease in plants, whereas claims 7 and 9 of the present application are drawn to a fertilizing composition, and claims 11-18 are drawn to a combination fertilizing/fungicidal composition.

There is no evidence in the record that from the method for controlling fungus disease in plants claimed in claims 10, 12, 16 and 18 of the copending application it would be obvious that the compositions claimed by claims 7, 9, and 11-18 would be effective for enhancing the growth of plants.

If still considered necessary by the Examiner, Applicant is prepared to enter an appropriate terminal disclaimer.

The Examiner also rejected claims 7-9 and 11-19 under 35 U.S.C. 103(a) as being

assertedly unpatentable over Bartlet, U.S.Patent No. 5,070,083, Ducret et al., U.S. Patent No. 4,139,616, Horriere et al., U.S.Patent No. 5,169,646, Lovatt, U.S. Patent No. 5,514,200, and Vetanovetz et al., U.S.Patent No. 5,395,418. Bartlet '083, Ducret et al. '616, and Horriere et al. '646 assertedly teach that phosphonate salts are old fungicides. Lovatt '200 and Vetanovetz et al. '418 assertedly teach that phosphate salts are old fertilizers. While recognizing that the references fail to teach specific examples of the old fungicides and fertilizers together, the examiner asserts that one skilled in this art would find ample motivation from these references to combine the well known fungicides and fertilizers together, where the results obtained thereby are no more than the additive effects of the ingredients, particularly because these references teach the combination of known fungicides and fertilizers. The Examiner further stated that the specification fails to set forth any data showing unexpected and/or unobvious results for the claimed combination.

The prior art must contain some suggestion or incentive that would have motivated one with skill in the art to modify a prior art reference to arrive at the present invention. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); *Ex parte Skinner*, 2 USPQ2d 1788 (Board of Patent Appeals, 1986). The prior art must also indicate a reasonable expectation of success to make the modifications, determined from the vantage point of one of ordinary skill in the art at the time the invention was made. Thus, there must be both a suggestion to modify and an expectation of success found in the prior art, not in the applicant's disclosure, to render an invention obvious. *In re Dow Chemical Company*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988).

"The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modifications." *In re*

Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984); *see also In re Mills*, 916 F.2d 680, 682, 16 USPQ2d 1430, 1432 (Fed. Cir. 1990).

None of the cited references, singly or in combination, teach, suggest, or provide any incentive to modify or combine those teachings such that it would have been obvious to one skilled in the art at the time of the applicant's invention to use a composition comprising a combination of phosphate and phosphonate derivatives to obtain the unexpected results of protecting plants against attack from both Phycomycete and Ascomycete by the application of a single solution as taught and claimed by applicant.

In each of the examples disclosed in the specification, PO_4 was tested alone, PO_3 was tested alone, and a combination of PO_3/PO_4 was tested, with the results of each of the tests compared with a control. In particular, as shown in Table 1, when a potassium phosphonate solution (containing no appreciable amount of phosphate) was applied to dogwood, pathological exacerbation of Ascomycete fungus occurred in 100% of the dogwood leaves in contrast to the control, which exhibited only 30% infection. On the other hand, application of the inventive composition that combined potassium phosphate and potassium phosphonate showed a drop in the amount of infection by about 20% below the control.

Further, as shown in Table 2, when only potassium phosphonate solution was applied to shumard oak, the percentage of infection by powdery mildew increased to 40% in contrast to a 20% infection for the control, indicating a pathological exacerbation of the Ascomycete fungi. On the other hand, application of the inventive composition that combined potassium phosphate and potassium phosphonate completely eliminated the infection: again, 20% *below* the control.

A cursory examination of each of the other sets of tests disclosed in Tables 3 through 5

reveal similar *unexpected* results.

Further, as shown in Table 6, all four nutritional treatments provided growth responses greater than the untreated control, including the combination of ½% each of PHOS-MIGHT + K- PHOS. This combination produced substantially higher growth responses than the control, an average of 20.3 shoots/rep, as opposed to only 3.8 shoots/rep in the control. This composition further provides the unexpected benefit of being fungicidal as well.

CONCLUSION

In view of the above, it is submitted that the claims, as amended, are in condition for allowance. Reconsideration of the rejections and objections is requested. All of the changes in this Amendment are believed to find support within the originally filed application and are urged to contain no new matter.

The Examiner is invited to contact the undersigned at the below-listed telephone number if it is felt that prosecution of the application may be expedited thereby.

Respectfully submitted,

John B. Taylor

BY:


Warren M. Haines II, Reg. No. 40,632
LATHROP & GAGE, L.C.
2345 Grand Boulevard
Kansas City, Missouri 64108
Telephone: (816) 460-5427
Facsimile: (816) 292-2001